



# MySQL Univ - New Release Model for the MySQL Server 2009-06-11

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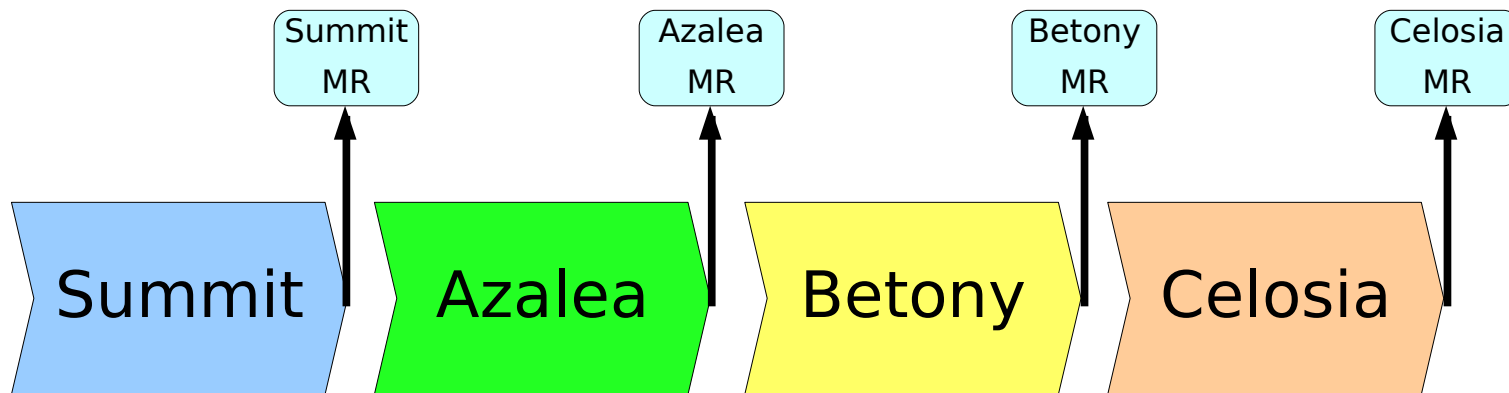
## Goal with introducing a New Release Model for the MySQL Server

- More predictable and more frequent releases
- Include Community Contributions faster
- Include Requested features faster

[http://forge.mysql.com/wiki/Development\\_Cycle](http://forge.mysql.com/wiki/Development_Cycle)

# New Release Model for the MySQL Server - at a glance

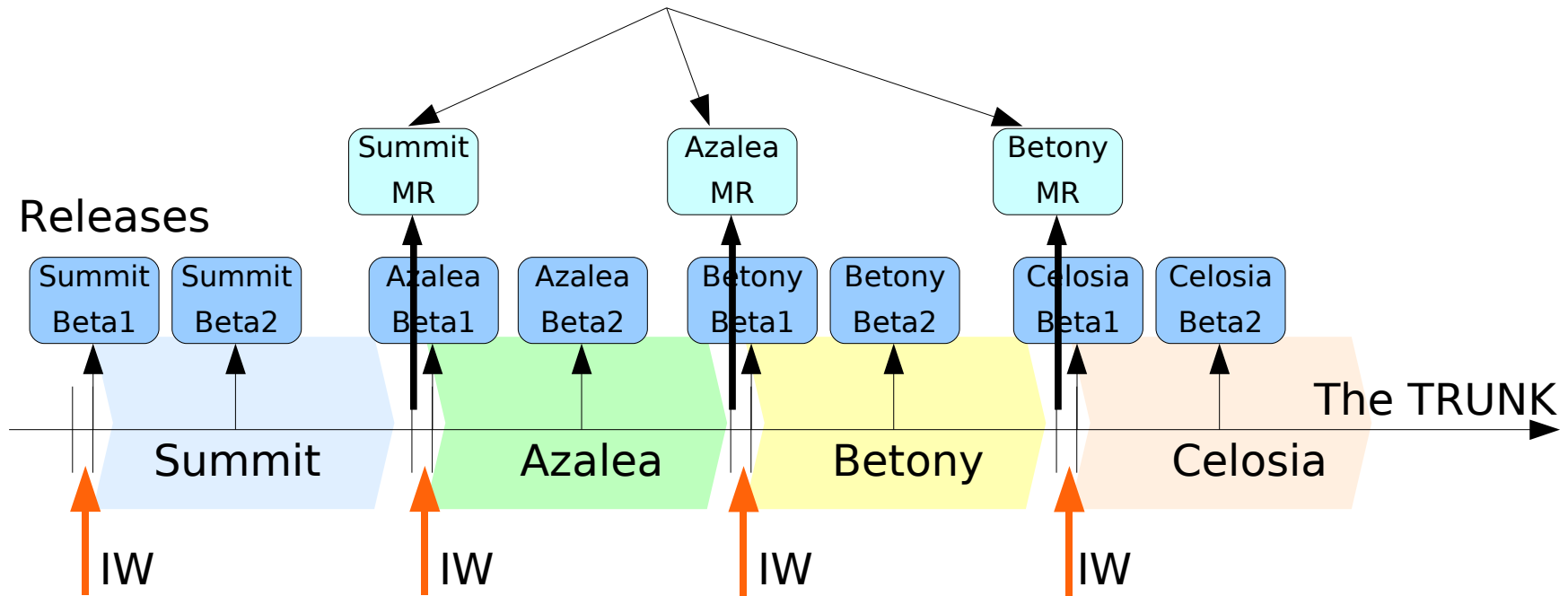
Milestone Releases (MR) with RC quality  
- every 3-6 months



[http://forge.mysql.com/wiki/Development\\_Cycle](http://forge.mysql.com/wiki/Development_Cycle)

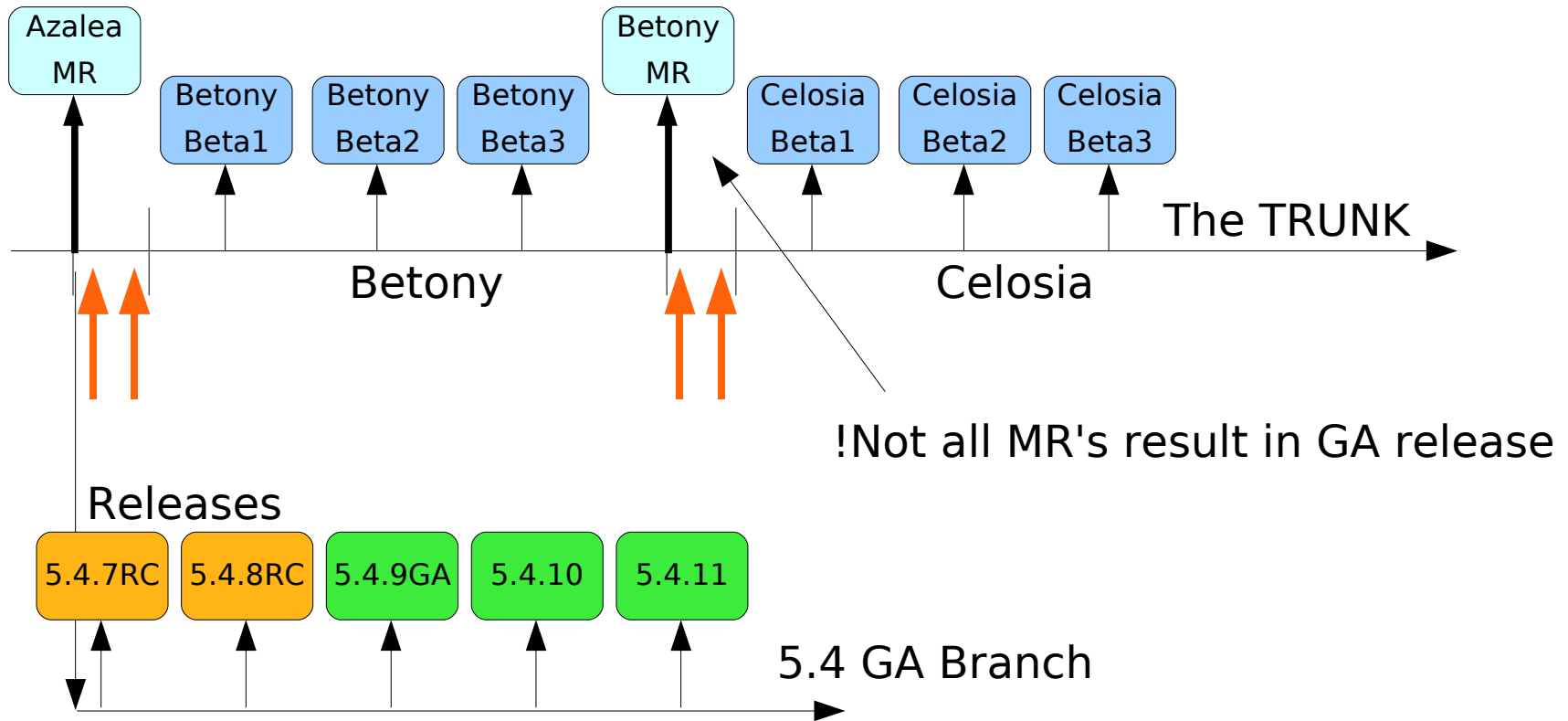
# With 5.4 Introducing - a New Release Model for the MySQL Server

Milestone Releases with RC quality  
- every 3-6 months



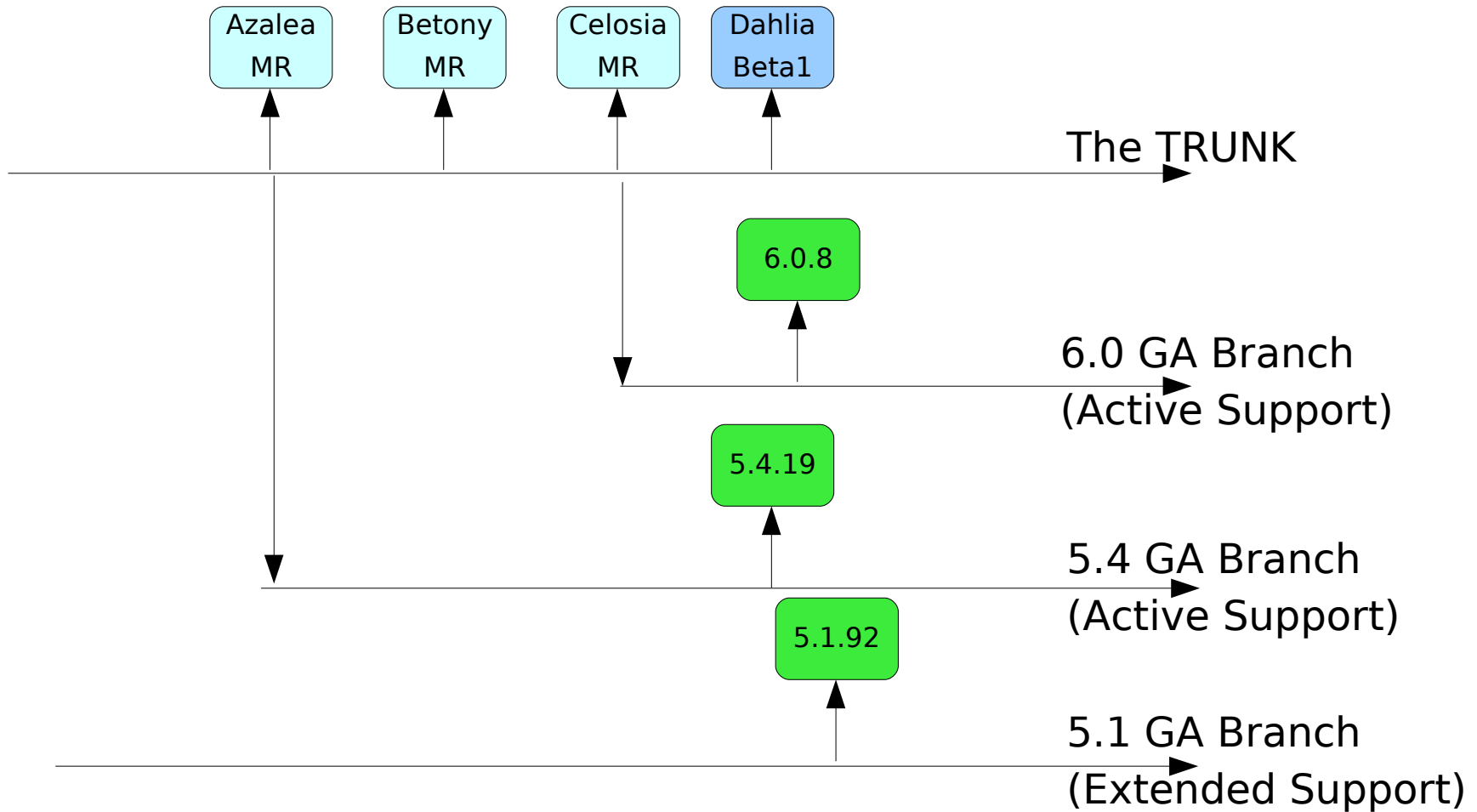
Features included only in Integration Window (IW)  
- few, well tested, Beta Quality features/changes

# Milestone Release – A Candidate for GA



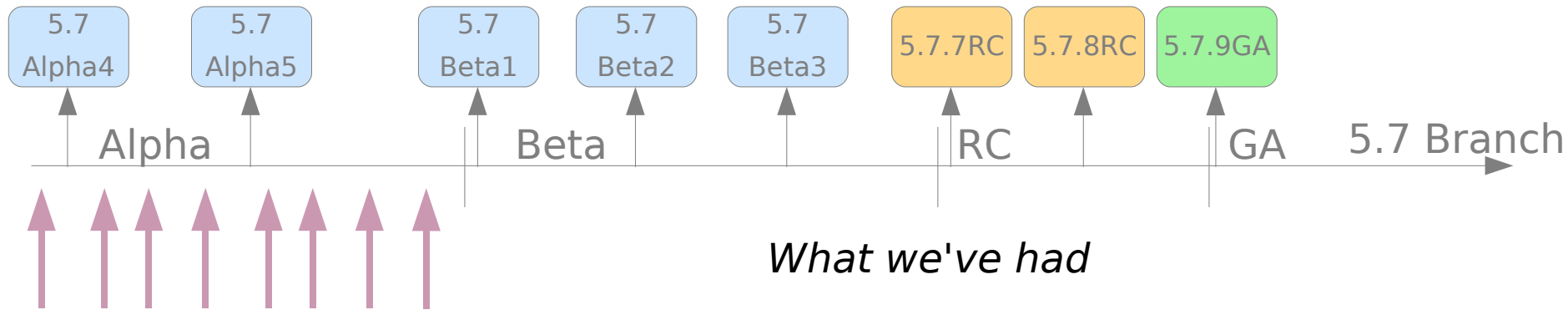
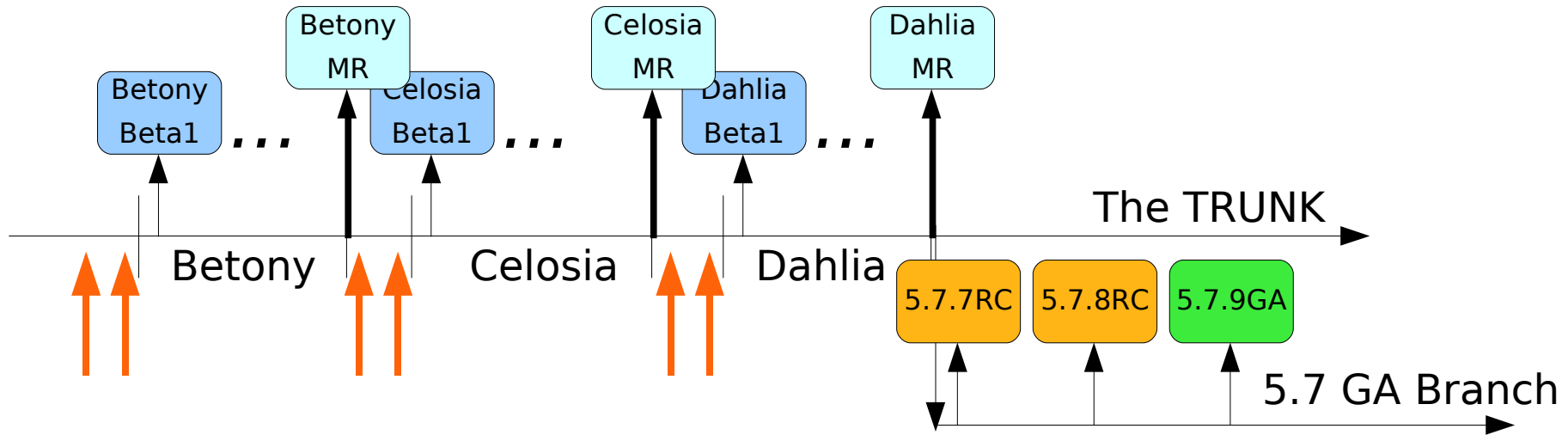
Once Branched for GA release  
 - no changes from before, MRU, QSP, EOL, etc.

# Over time...

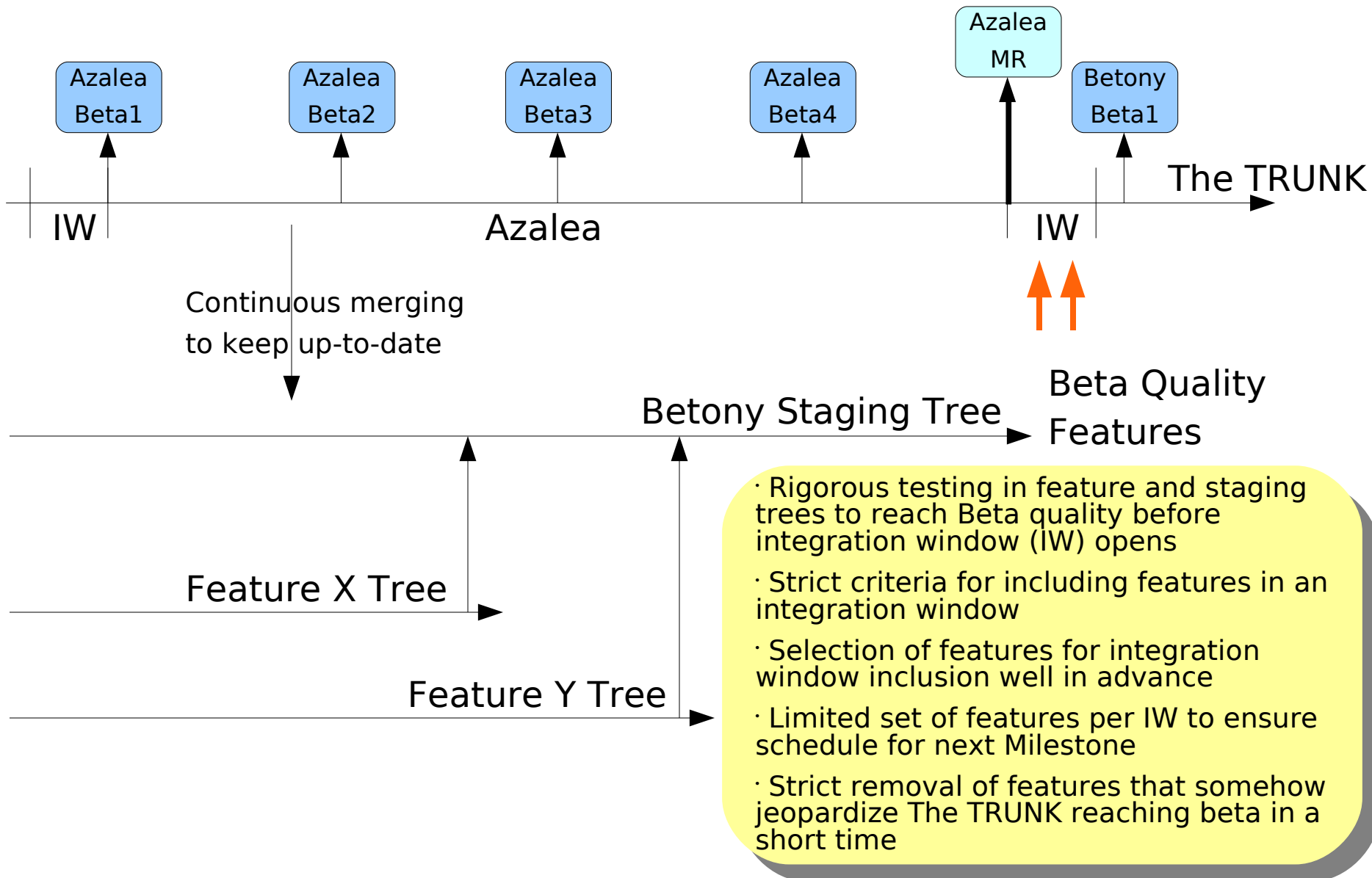


- GA releases every 12-18 months
- Max 2 releases in Active Support

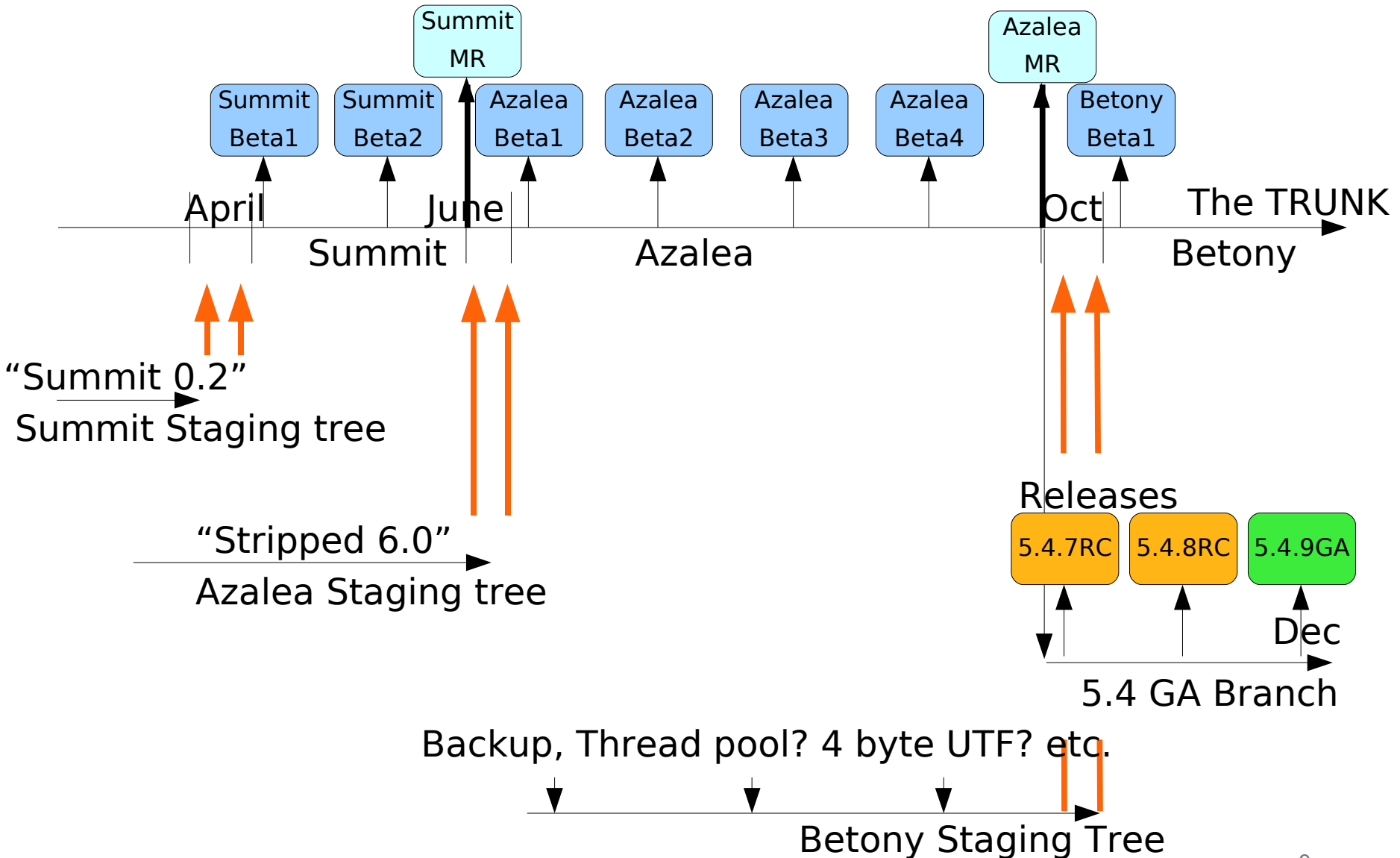
# Milestone Release Model vs. What we've had – Side-by-Side Comparison



# Ensuring Beta Quality - Staging tree + Testing



# Practically - Next 6-9 months



## How is this different from before?

- Releases from The TRUNK is always at least beta quality. We used to have alpha.
- Features are stabilized to beta quality in staging and/or feature trees rather than The TRUNK
- Features are taken out of The TRUNK if they cannot be stabilized in time
- The TRUNK is stabilized to RC quality at least every 6 months – even if it will not be evolved to a GA release – i.e. not all Milestone Releases become a GA release.

[http://forge.mysql.com/wiki/Development\\_Cycle](http://forge.mysql.com/wiki/Development_Cycle)

## How does this help?

- As The TRUNK always has high quality we can predict GA date with less uncertainty
- Possible GA is never more than 6 months away
- We can replan GA contents more rapidly. E.g. introduce new features (customer requested, community developed)
- Release earlier if needed

[http://forge.mysql.com/wiki/Development\\_Cycle](http://forge.mysql.com/wiki/Development_Cycle)

# MySQL Server Milestones - flagship features

- numbers dropped as they may change

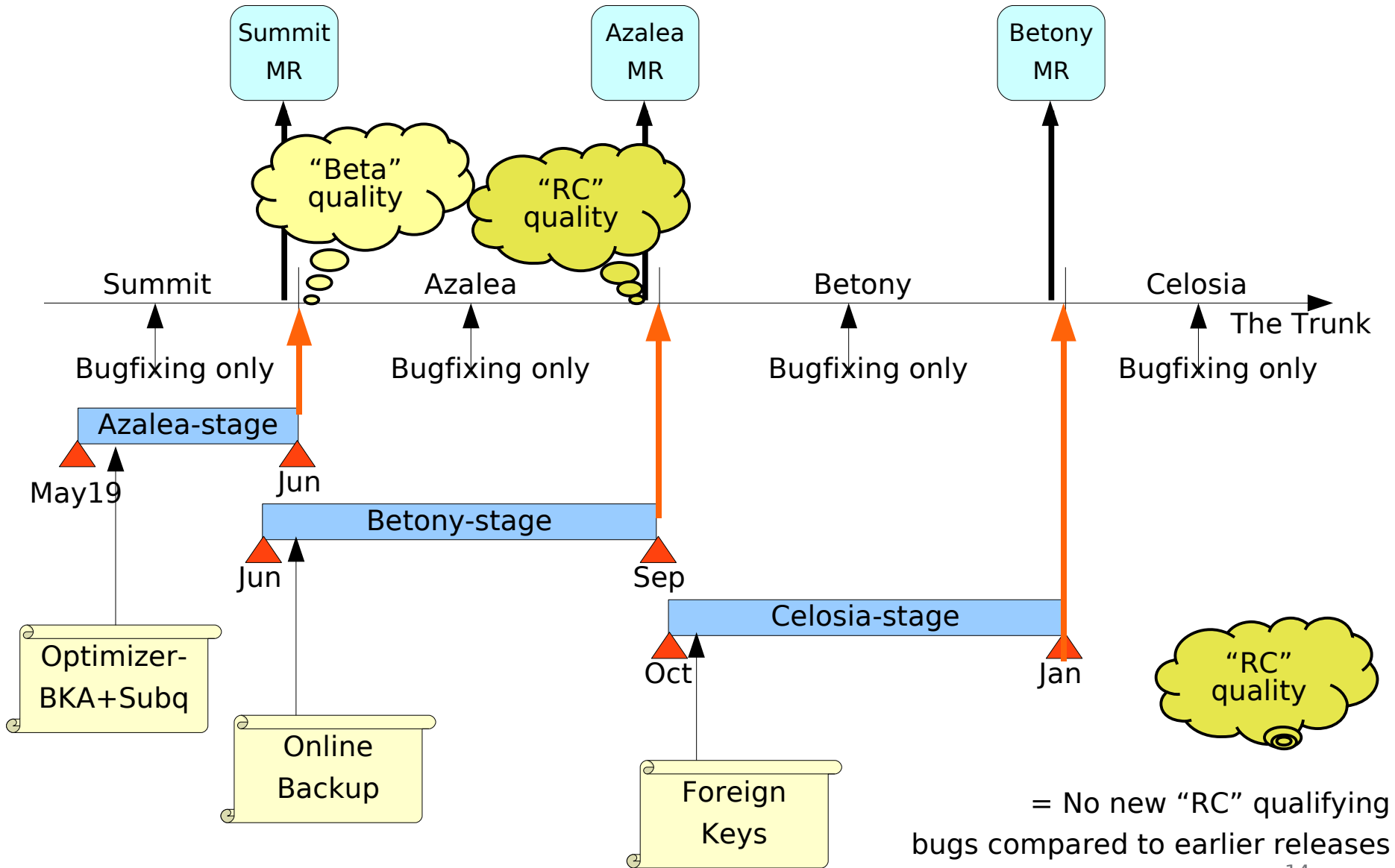
- Summit - June 2009
  - Innodb scalability and performance
- Azalea - September 2009
  - Optimizer - BKA and Subquery opt
- Betony - January 2010
  - Online Backup
- Celosia - May 2010
  - Foreign Key support
- Dahlia - September 2010
- Ennel - January 2011

## Target milestone staging lifecycle dates

- period during which “feature” patches can be accepted into a milestone

- Azalea-stage - May 19 -> June -2009
  - Optimizer - BKA and Subquery opt
- Betony-stage - June -> September -2009
  - Online Backup
- Celosia-stage - October -2009 -> January -2010
  - Foreign Key support

# Target milestone staging lifecycle dates - graphic



Summit

Azalea

Betony

Celosia

## External contributions

- **Innodb “SMP patch”** - Google
- **Innodb “IO patch”** - Google

## Internal developement

- Innodb “spin loop” improvements
- Innodb “thread concurrency” improvements
- Dtrace probes

Summit

Azalea

Betony

Celosia

## Internal Development

- **Subquery optimizations**
- **Batched Key Access**
- SIGNAL, RESIGNAL (exception handling in Stored Procedures)
- Information schema optimizations and new Information schema tables
- Making MySQL DDL statements safe with regard to the concurrently running transactions
- Out parameters for Prepared stmts available for clients (connectors)

Summit

Azalea

Betony

Celosia

## Internal Development

- Improved support for Circular Replication (ignore server)
- Replication keep alive (heartbeat)
- Slave position Synchronization
- Relay log recovery
- Binlog performance optimizations (~10%)

## External contributions

- Semi synchronous replication plugin - Google

Summit

**Azalea**

Betony

Celosia

## Internal Plugin interface development

- Pluggable Audit Interface
- Replication Semi-Sync Plugin Interface

Summit

Azalea

Betony

Celosia

### Maybe in

- Performance Schema
- Partitioning performance enhancements
- Truncate partition
- Query Join Execution Tracing
- Improved Plugin Support
- Improved GIS support

Summit

Azalea

Betony

*tentative*

Celosia

- **Online Backup**
- Globalization, localization – bit by bit
- Replication enhancements
- EXECUTE IMMEDIATE
- Partitioning++
- Scalability enhancements (write, Threadpooling)
- 4-byte UTFxx
- More Subquery Optimizations

Summit

Azalea

Betony

Celosia

*tentative*

- **Foreign key support**
- Globalization, localization – bit by bit
- Replication enhancements
- Query Cache Scalability

### Maybe

- Parallell Alter Table
- Query Pushdown

Azalea

Betony

Celosia

Dahlia

*tentative*

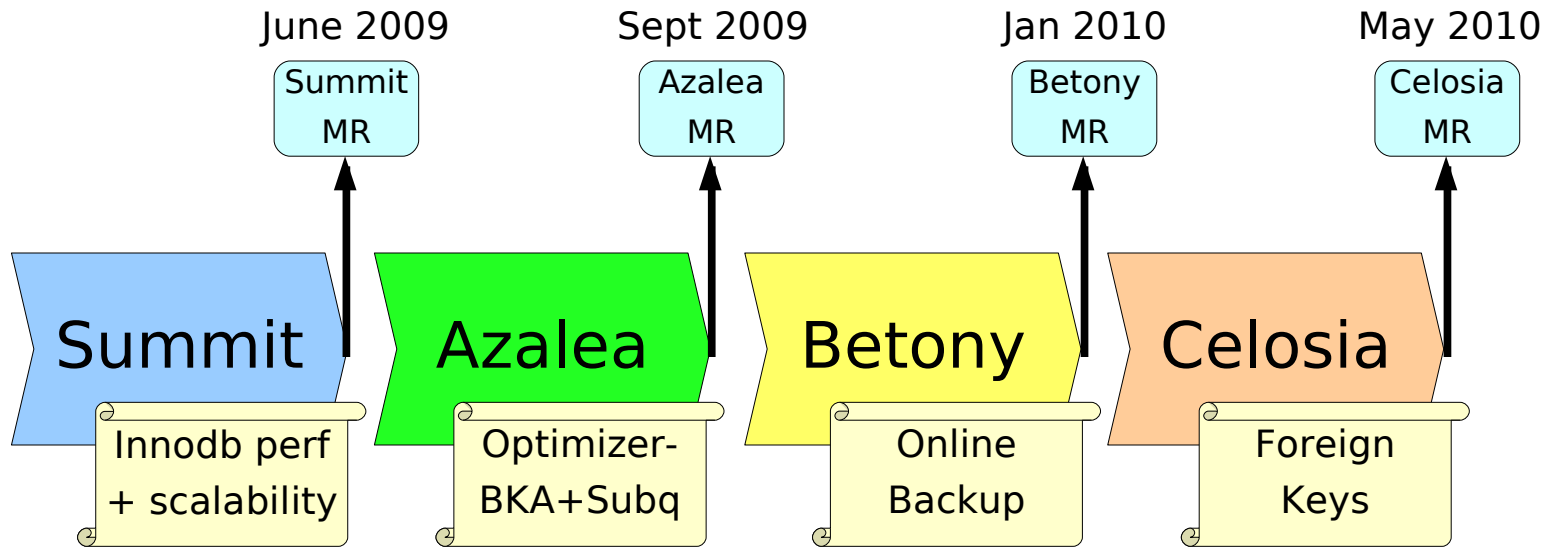
## To consider

- Parallel Query
- Online alter table (Online DDL changes)
- Security groups/roles (Easier privilege management)
- Transparent data encryption (Table/column level)
- Data auditing (for compliance)
- External authentication (O/S level authorizations)

## MySQL Server Milestones and Reengineering

- Reengineering of the MySQL Server is an ongoing parallel Development activity
- Reengineering tasks are, to the extent it is possible, broken into smaller tasks
- Reengineering tasks are fitted into the Milestones just like any other Development task
- An effort will be made to put at least a couple of Reengineering tasks into each Milestone

# MySQL Server Milestones and flagship features



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**Thank You!**

**Discussion...**